

## SEQUENCE LISTING

&lt;110&gt; University of Utah Research Foundation

<120> ELASTIN PREVENTS OCCLUSION OF BODY VESSELS BY VASCULAR SMOOTH  
MUSCLE CELLS

&lt;130&gt; HYDR-PWO-005

&lt;160&gt; 6

&lt;170&gt; PatentIn version 3.2

&lt;210&gt; 1

&lt;211&gt; 2260

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 1

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<210> 2  
<211> 757  
<212> PRT  
<213> Homo sapiens

<400> 2

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Leu Leu Ser Ile Leu His Pro Ser Arg Pro Gly Gly Val Pro Gly Ala  
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Ile Pro Gly Gly Val Pro Gly Gly Val Phe Tyr Pro Gly Ala Gly Leu  
35 40 45

Gly Ala Leu Gly Gly Gly Ala Leu Gly Pro Gly Gly Lys Pro Leu Lys  
50 55 60

Pro Val Pro Gly Gly Leu Ala Gly Ala Gly Leu Gly Ala Gly Leu Gly  
65 70 75 80

Ala Phe Pro Ala Val Thr Phe Pro Gly Ala Leu Val Pro Gly Gly Val  
 85 90 95

Ala Asp Ala Ala Ala Tyr Lys Ala Ala Lys Ala Gly Ala Gly Leu  
 100 105 110

Gly Gly Val Pro Gly Val Gly Gly Leu Gly Val Ser Ala Gly Ala Val  
 115 120 125

Val Pro Gln Pro Gly Ala Gly Val Lys Pro Gly Lys Val Pro Gly Val  
 130 135 140

Gly Leu Pro Gly Val Tyr Pro Gly Gly Val Leu Pro Gly Ala Arg Phe  
 145 150 155 160

Pro Gly Val Gly Val Leu Pro Gly Val Pro Thr Gly Ala Gly Val Lys  
 165 170 175

Pro Lys Ala Pro Gly Val Gly Gly Ala Phe Ala Gly Ile Pro Gly Val  
 180 185 190

Gly Pro Phe Gly Gly Pro Gln Pro Gly Val Pro Leu Gly Tyr Pro Ile  
 195 200 205

Lys Ala Pro Lys Leu Pro Gly Gly Tyr Gly Leu Pro Tyr Thr Thr Gly  
 210 215 220

Lys Leu Pro Tyr Gly Tyr Gly Pro Gly Gly Val Ala Gly Ala Ala Gly  
 225 230 235 240

Lys Ala Gly Tyr Pro Thr Gly Thr Gly Val Gly Pro Gln Ala Ala Ala  
 245 250 255

Ala Ala Ala Ala Lys Ala Ala Ala Lys Phe Gly Ala Gly Ala Ala Gly  
 260 265 270

Val Leu Pro Gly Val Gly Gly Ala Gly Val Pro Gly Val Pro Gly Ala  
 275 280 285

Ile Pro Gly Ile Gly Gly Ile Ala Gly Val Gly Thr Pro Ala Ala Ala  
 290 295 300

Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala Ala  
 305 310 315 320

Gly Leu Val Pro Gly Gly Pro Gly Phe Gly Pro Gly Val Val Gly Val  
 325 330 335

Pro Gly Ala Gly Val Pro Gly Val Gly Val Pro Gly Ala Gly Ile Pro  
 340 345 350

Val Val Pro Gly Ala Gly Ile Pro Gly Ala Ala Val Pro Gly Val Val  
 355 360 365

Ser Pro Glu Ala Ala Ala Lys Ala Ala Ala Lys Ala Ala Lys Tyr Gly  
 370 375 380

Ala Arg Pro Gly Val Gly Val Gly Gly Ile Pro Thr Tyr Gly Val Gly  
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Ala Gly Gly Phe Pro Gly Phe Gly Val Gly Val Gly Gly Ile Pro Gly  
 405 410 415

Val Ala Gly Val Pro Ser Val Gly Gly Val Pro Gly Val Gly Gly Val  
 420 425 430

Pro Gly Val Gly Ile Ser Pro Glu Ala Gln Ala Ala Ala Ala Lys  
 435 440 445

Ala Ala Lys Tyr Gly Val Gly Thr Pro Ala Ala Ala Ala Lys Ala  
 450 455 460

Ala Ala Lys Ala Ala Gln Phe Gly Leu Val Pro Gly Val Gly Val Ala  
 465 470 475 480

Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly  
 485 490 495

Leu Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly  
 500 505 510

Val Gly Val Ala Pro Gly Ile Gly Pro Gly Gly Val Ala Ala Ala Ala  
 515 520 525

Lys Ser Ala Ala Lys Val Ala Ala Lys Ala Gln Leu Arg Ala Ala Ala  
 530 535 540

Gly Leu Gly Ala Gly Ile Pro Gly Leu Gly Val Gly Val Gly Val Pro  
 545 550 555 560

Gly Leu Gly Val Gly Ala Gly Val Pro Gly Leu Gly Val Gly Ala Gly

565	570	575
Val Pro Gly Phe Gly Ala Gly Ala Asp Glu Gly Val Arg Arg Ser Leu		
580	585	590
Ser Pro Glu Leu Arg Glu Gly Asp Pro Ser Ser Ser Gln His Leu Pro		
595	600	605
Ser Thr Pro Ser Ser Pro Arg Val Pro Gly Ala Leu Ala Ala Ala Lys		
610	615	620
Ala Ala Lys Tyr Gly Ala Ala Val Pro Gly Val Leu Gly Gly Leu Gly		
625	630	640
Ala Leu Gly Gly Val Gly Ile Pro Gly Gly Val Val Gly Ala Gly Pro		
645	650	655
Ala Ala Ala Ala Ala Ala Lys Ala Ala Ala Lys Ala Ala Gln Phe		
660	665	670
Gly Leu Val Gly Ala Ala Gly Leu Gly Gly Leu Gly Val Gly Gly Leu		
675	680	685
Gly Val Pro Gly Val Gly Gly Leu Gly Gly Ile Pro Pro Ala Ala Ala		
690	695	700
Ala Lys Ala Ala Lys Tyr Gly Ala Ala Gly Leu Gly Gly Val Leu Gly		
705	710	715
Gly Ala Gly Gln Phe Pro Leu Gly Gly Val Ala Ala Arg Pro Gly Phe		
725	730	735
Gly Leu Ser Pro Ile Phe Pro Gly Gly Ala Cys Leu Gly Lys Ala Cys		
740	745	750
Gly Arg Lys Arg Lys		
755		

&lt;210&gt; 3

&lt;211&gt; 6

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; A bioactive fragment of tropoelastin.

&lt;400&gt; 3

Val Gly Val Ala Pro Gly  
1 5

<210> 4  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Control random fragment.

<400> 4

Val Ser Leu Ser Pro Gly  
1 5

<210> 5  
<211> 582  
<212> DNA  
<213> Homo sapiens

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aactatgtgg cagatatcga ggtggatgga aagcaggtag agttggcttt gtgggacaca 180  
gctgggcagg aagattatga tcgcctgagg cccctctcct acccagatac cgatgttata 240  
ctgatgtgtt tttccatcga cagccctgat agtttagaaa acatcccaga aaagtggacc 300  
ccagaagtca agcatttctg tcccaacgtg cccatcatcc tggttgggaa taagaaggat 360  
cttcggaatg atgagcacac aaggcgggag ctagccaaga tgaagcagga gccggtgaaa 420  
cctgaagaag gcagagatat ggcaaacagg attggcgctt ttgggtacat ggagtgttca 480  
gcaaagacca aagatggagt gagagaggtt tttgaaatgg ctacgagagc tgctctgcaa 540  
gctagacgtg ggaagaaaaa atctggttgc cttgtcttgt ga 582

<210> 6  
<211> 193  
<212> PRT  
<213> Homo sapiens

<400> 6

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Val Tyr Val Pro Thr Val Phe Glu Asn Tyr Val Ala Asp Ile Glu Val  
 35 40 45

Asp Gly Lys Gln Val Glu Leu Ala Leu Trp Asp Thr Ala Gly Gln Glu  
 50 55 60

Asp Tyr Asp Arg Leu Arg Pro Leu Ser Tyr Pro Asp Thr Asp Val Ile  
 65 70 75 80

Leu Met Cys Phe Ser Ile Asp Ser Pro Asp Ser Leu Glu Asn Ile Pro  
 85 90 95

Glu Lys Trp Thr Pro Glu Val Lys His Phe Cys Pro Asn Val Pro Ile  
 100 105 110

Ile Leu Val Gly Asn Lys Lys Asp Leu Arg Asn Asp Glu His Thr Arg  
 115 120 125

Arg Glu Leu Ala Lys Met Lys Gln Glu Pro Val Lys Pro Glu Glu Gly  
 130 135 140

Arg Asp Met Ala Asn Arg Ile Gly Ala Phe Gly Tyr Met Glu Cys Ser  
 145 150 155 160

Ala Lys Thr Lys Asp Gly Val Arg Glu Val Phe Glu Met Ala Thr Arg  
 165 170 175

Ala Ala Leu Gln Ala Arg Arg Gly Lys Lys Lys Ser Gly Cys Leu Val  
 180 185 190

Leu